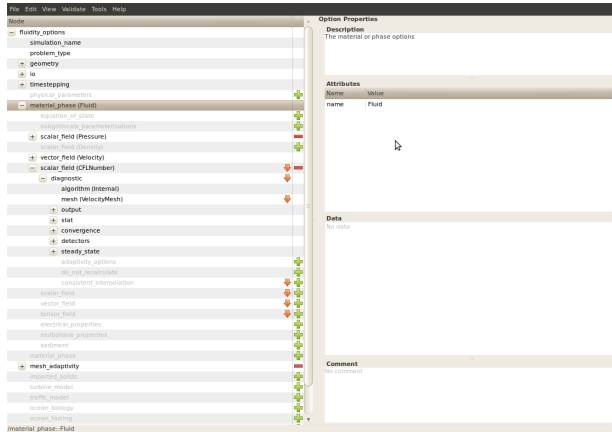


Driving diamond

Jon Hill¹

1 - Dept of Earth Science and Engineering, Imperial College London

Diamond



Ham et al., 2010

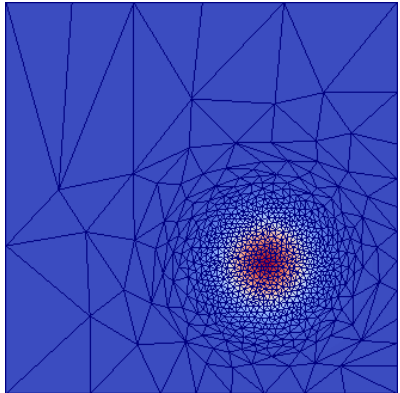
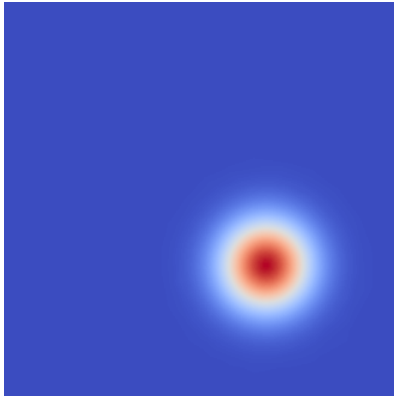
FLML

- ▶ FLML = FLuidity Markup Language
- ▶ XML file with element pre-defined...
- ▶ ...in another XML file called a **schema**
- ▶ Diamond loads the schema...
- ▶ ...and gives you the options contained within

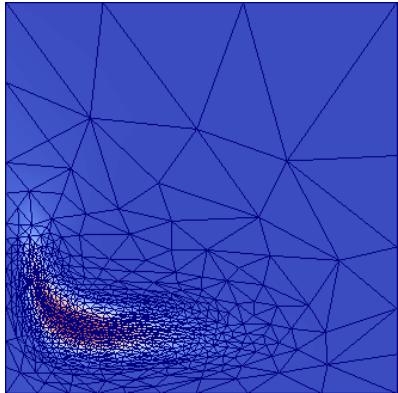
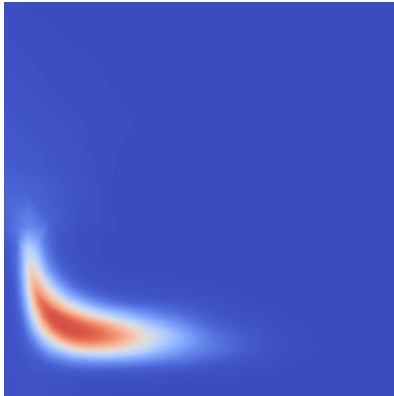
Live demo

- ▶ Stommel gyre
- ▶ Prescribed velocity
- ▶ Adaptive mesh
- ▶ Advect a tracer (temperature) and measure mixing

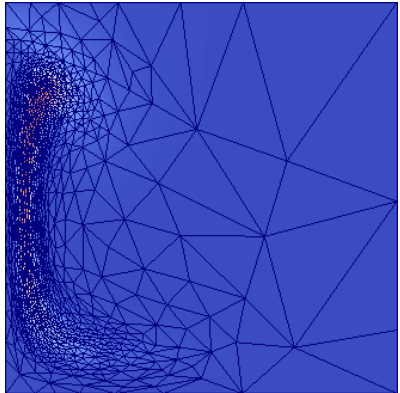
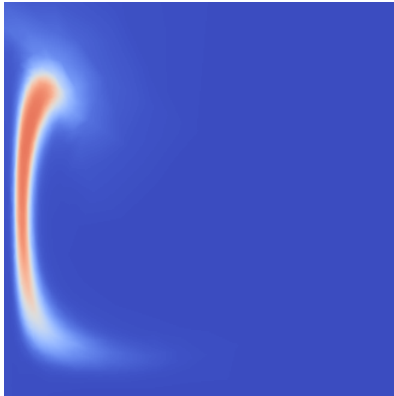
Output



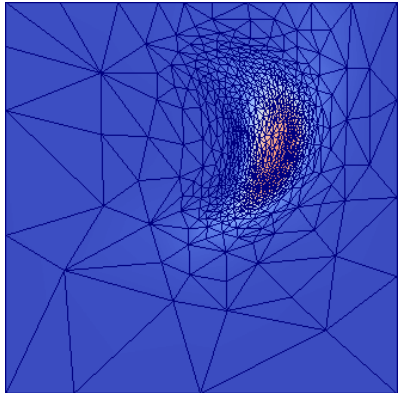
Output



Output



Output



Before we start...

Make a directory in your data/username/ directory

```
cp /scratch/Stommel2_adapt.* .
```

```
cp /scratch/stommel.pvsm .
```

```
cp /scratch/Stommel_function.py .
```

Create a FLML

Live demo

```
diamond -s  
/data/<username>/fluidity/schema/fluidity_options.rng  
my.flml
```

Running Fluidity

```
/path/bin/fluidity my.flml  
/data/<username>/fluidity/bin/fluidity my.flml  
/home/<username>/fluidity/bin/fluidity -l -v2 my.flml
```

Visualising your output

```
paraview --state=stommel.pvsm
```

